

09/375,906

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,757,272 B1
DATED : June 29, 2004
INVENTOR(S) : Sadayuki Abeta et al.

Page 1 of 4

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 1,

Lines 22 and 42, change "Raleigh" to -- Rayleigh --

Column 2,

Line 2, change "Raleigh" to -- Rayleigh --

Line 13, after "estimates" change "ξ" to ξ

Line 31, after "slots" change "are" to -- to be --

Line 31, after "estimates" change " ξ " to ξ

Line 38, change "ξ" to ξ

Line 40, after "assign" change "a" to -- the --

Line 42, after "and" remove "."

Line 42, before "best" change "Hence" to -- hence --

Column 3,

Line 12, change "Raleigh" to -- Rayleigh --

Lines 17 and 18, change "according to the invention as claimed in claim 1," to -- in the first aspect of the present invention, there is provided --

Line 34, after "each" change "slot." to -- slot, and --

Between lines 34 and 35, insert a new sub-paragraph with the text -- the power of the data symbols and pilot symbols is controlled on a slot by slot basis. --

Line 35, change "According to the invention as claimed in claim 2," to -- In the second aspect of the present invention there is provided --

Line 39, change "comprises:" to -- comprising: --

Line 63, change "According to the invention as claimed in claim 3," to -- In the third aspect of the present invention, there is provided --

Line 65, change "comprises:" to -- comprising: --

Column 4,

Line 29, change "modulating" to -- demodulating --

Lines 33 and 34, change "According to the invention as claimed in claim 4, in the CDMA transceiver as claimed in claim 3, he" to -- Here the --

Lines 35, 40 and 46, change "further comprises" to -- may further comprise --

Lines 38 and 39, change "According to the invention as claimed in claim 5, in the CDMA transceiver as claimed in claim 4," to -- Here --

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Column 4,

Lines 44 and 45, change "According to the invention as claimed in claim 6, in the CDMA transceiver as claimed in any one of claims 3-5," to -- Here --

Lines 50 and 51, remove "transmits the spread combined symbol sequence"

Line 51, before "power" change "he" to -- the --

Lines 53 and 54, change "According to the invention as claimed in claim 7, in the equipment as claimed in any one of claims 1-6," to -- Here --

Line 55, before "controlled" change "is" to -- may be --

Lines 57 and 58, change "According to the invention as claimed in claim 8, in the equipment as claimed in any one of claims 1-6," to -- Here --

Lines 60 and 62, after "sequence" change "is" to -- may be --

Lines 63 and 64, change "According to the invention as claimed in claim 9, in the equipment as claimed in any one of claims 1-8," to -- Here --

Line 65, before "consist" insert -- may --

Lines 66 and 67, change "According to the invention as claimed in claim 10, in the equipment as claimed in any one of claims 1-9," to -- Here --

Column 5,

Lines 6 and 7, change "According to the invention as claimed in claim 11, in the equipment as claimed in any one of claims 1-10," to -- Here --

Line 10, change "According to the invention as claimed in claim 12," to -- In the fourth aspect of the present invention, there is provided --

Line 13, after "symbols," change "comprises" to -- comprising --

Line 21, before "wherein" begin a new sub-paragraph

Line 23, after "each" change "slot." to -- slot, and --

Between lines 23 and 24, insert a new sub-paragraph with the text -- the power of the data symbols and pilot symbols is controlled on a slot by slot basis. --

Line 24, change "According to the invention as claimed in claim 13," to -- In the fifth aspect of the present invention, there is provided --

Line 28, after "spread," change "comprises" to -- comprising --

Line 51, change "According to the invention as claimed in claim 14," to -- In the sixth aspect of the present invention, there is provided --

Line 52, after "method" change "comprises" to -- comprising --

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Column 6,

Line 19, after the last paragraph of the section entitled "DISCLOSURE OF THE INVENTION" and before the section entitled "BRIEF DESCRIPTION OF DRAWINGS" insert the following paragraphs:

—In the seventh aspect of the present invention, there is provided a channel estimation unit for obtaining channel estimates of data symbols from pilot symbols in a combined symbol sequence which has a plurality of slots and includes the data symbols and the pilot symbols, said channel estimation unit comprising:

means for locating the pilot symbols in the combined symbol sequence;

means for generating pilot blocks by extracting the pilot symbols from two or more slots in the combined symbol sequence in accordance with a located result; and

means for obtaining the channel estimates of the data symbols by calculating a weighted sum of averages of the pilot symbols in the individual pilot blocks,

wherein a magnitude of weighting differs between at least two data symbols in each slot, and when obtaining the channel estimates of the data symbols in an nth slot in the combined symbol sequence, where n is an integer, the pilot blocks are generated from (n-K+1)th slot to (n+K)th slot in the combined symbol sequence, where K is a natural number.

In the eighth aspect of the present invention, there is provided a channel estimation method of obtaining channel estimates of data symbols from pilot symbols in a combined symbol sequence which has a plurality of slots and includes the data symbols and the pilot symbols, said channel estimation method comprising the steps of:

locating the pilot symbols in the combined symbol sequence;

generating pilot blocks by extracting the pilot symbols from two or more slots in the combined symbol sequence in accordance with a located result; and

obtaining the channel estimates of the data symbols by calculating a weighted sum of averages of the pilot symbols in the individual pilot blocks.

wherein a magnitude of weighting differs between at least two data symbols in each slot, and when obtaining the channel estimates of the data symbols in an nth slot in the combined symbol sequence, where n is an integer, the pilot blocks are generated from (n-K+1)th slot to (n+K)th slot in the combined symbol sequence, where K is a natural number.—

Column 8,

Lines 1, 4 and 7 change "ξ" to $-\tilde{\xi}-$

Line 2, before "obtained" change "is" to -- are --

Line 10, change $\tilde{\xi}(m, n) = \sum_{i=-K+1}^K \alpha(m, i) \cdot \tilde{\xi}(n+i)$ to $-\tilde{\xi}(m, n) = \sum_{i=-K+1}^K \alpha(m, i) \cdot \tilde{\xi}(n+i) -$

Line 56, after "receiving" change "processing" to -- process --

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Column 9,

Lines 10 and 14, change "ξ" to —ξ—

Line 18, after "carries" insert -- out the in-phase combining of the compensated data --

Line 40, after "spreader" change "727," to -- 727. --

Line 46, after "transmitting" change "processing" to -- process --

Column 10,

Line 18, after "section" change "840," to -- 840. --

Column 11,

Line 41, before "data" change "thee" to -- the --

Line 41, before "pilot" change "tile" to -- the --

Line 45, after "generating" change "Pilot" to -- pilot --

Line 54, change "integers" to -- integer --

Column 12,

Line 15, before "for" change "mean" to -- means --

Line 34, before "differs" change "weightling" to -- weighting --

Line 54, after "by" change "de spreading" to -- de-spreading --

Column 13,

Line 44, change "clam" to -- claim --

Column 14,

Line 21, before "located" change "tie" to -- the --

Line 38, after "and" begin a new sub-paragraph.

Signed and Sealed this

Twenty-sixth Day of April, 2005



JON W. DUDAS
Director of the United States Patent and Trademark Office